

AMENDMENT

Amendments to the Claims

A complete listing of the claims follows. Please cancel claim 14 and amend claims 1, 5, 7-10, 13, 19, 22, 24, and 28 as indicated below. All other claims remain the same as originally presented in the application.

1. (Currently amended) An apparatus for isolating, in response to a device isolation signal and a bus idle status signal, a device from a bus without interrupting system operation, the apparatus comprising:

bus interface logic in communication with the bus, the bus interface logic generating a signal indicating the idle status of the bus;

an isolation switch in communication with the bus;

a device isolation control line; and

isolation control logic in communication with the bus interface logic, the device isolation control line, and the isolation switch,

wherein the isolation control logic transmits an isolation switch control signal to the isolation switch in response to the generated bus idle status signal from the bus interface logic and at the received device isolation signal on the device isolation control line.

2. (Original) The apparatus of claim 1 wherein the bus interface logic comprises a state machine.
3. (Original) The apparatus of claim 1 wherein the bus interface logic comprises combinatorial logic.

4. (Original) The apparatus of claim 1 wherein the bus interface logic monitors all bus transactions.
5. (Currently amended) The apparatus of claim 1 wherein the bus idle status signal generated by the bus interface logic indicates that the bus is idle.
6. (Original) The apparatus of claim 1 wherein the isolation control logic comprises combinatorial logic.
7. (Currently amended) The apparatus of claim 1 wherein the isolation control logic receives the device isolation signal on the device isolation control line from logic monitoring the operational status of the system.
8. (Currently amended) The apparatus of claim 1 wherein the isolation control logic receives the device isolation signal on the device isolation control line from a hot-plug logic element.
9. (Currently amended) The apparatus of claim 8 wherein the hot-plug logic element generates the device isolation signal on the device isolation control line responsive to the physical removal of the device from its slot.
10. (Currently amended) The apparatus of claim 1 wherein the isolation control logic receives the device isolation signal on the device isolation control line from protocol checker logic monitoring the validity of bus transactions.
11. (Currently amended) The apparatus of claim 10 wherein the protocol checker logic generates the device isolation signal on the device isolation control line responsive to a detected protocol violation.
12. (Original) The apparatus of claim 10 wherein the bus transactions are communicated on the bus in relation to clock cycles.

13. (Currently amended) The apparatus of claim 12 wherein the protocol checker logic generates the device isolation signal on the device isolation control line during the same clock cycle as the detected protocol violation.
14. (Canceled)
15. (Original) The apparatus of claim 1 wherein the isolation control logic comprises a timer measuring elapsed time.
16. (Original) The apparatus of claim 15 wherein the timer measures elapsed time relative to a system event.
17. (Original) The apparatus of claim 16 wherein a timeout signal is generated in response to the elapsed time exceeding a predetermined threshold.
18. (Currently amended) The apparatus of claim 17 wherein the isolation control logic transmits a bus reset signal responsive to receiving both the device isolation signal on the device isolation control line and the timeout signal from the timer.
19. (Currently amended) In a system having a bus controlled by a bus controller, a device isolation control line, and having at least one bus device in communication with the bus via an isolation switch, a method for isolating the bus device from the bus, the method comprising the steps:
- (a) receiving a signal on the device isolation control line identifying a bus device to be isolated, the bus device performing a bus transaction;
 - (b) receiving a bus idle status signal; and
 - (c) transmitting an isolation switch control signal responsive to both the received device isolation signal and the received bus idle status signal.

20. (Original) The method of claim **19** further comprising the step of isolating the identified bus device from the bus responsive to the received bus device isolation signal.
21. (Original) The method of claim **19** further comprising the step of inhibiting bus access.
22. (Currently amended) The method of claim **19** further comprising the steps of:
- (a) receiving a timeout signal; and
 - (b) resetting the bus responsive to receiving both the timeout signal and the bus status idle signal indicating that the bus is not idle.
23. (Original) The method of claim **22** wherein step (b) comprises isolating the bus controller from the bus.
24. (Currently amended) An apparatus for isolating a device from a bus without interrupting system operation, the apparatus comprising:
- means for receiving a signal identifying a bus device to be isolated, the identified bus device performing a bus transaction;
 - means for receiving a bus idle status signal; and
 - means for transmitting an isolation switch control signal responsive to both the received bus device isolation signal and the received bus idle status signal.
25. (Original) The apparatus of claim **24** further comprising a means for isolating the identified bus device from the bus responsive to the received bus device isolation signal.

26. (Original) The apparatus of claim **25** wherein the bus device isolation means comprises an isolation switch.
27. (Original) The apparatus of claim **24** further comprising a means for inhibiting bus access.
28. (Currently amended) The apparatus of claim **24** further comprising:
- a timing means providing a timeout signal; and
- a bus reset means resetting the bus responsive to receiving both the timeout signal and the bus idle status signal indicating that the bus is not idle.
29. (Original) The apparatus of claim **28** wherein the bus reset means isolates the bus controller from the bus.